

LISTING OF CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

1. (previously presented) A method for the interpolation of input values of an input signal, with which method output values of an output signal are produced, in which the sampling sequence frequency of the output signal is greater than the sampling sequence frequency of the input signal and the shape of the output signal essentially corresponds to the shape of the input signal, comprising the steps of:

determining the difference between a first and a subsequent second input value;

scaling interpolation values of an interpolation progression in dependence on the difference determined between the first and a subsequent second input value; and

producing successive output values by addition of the first input value to a scaled interpolation value.

2. (previously presented) A method according to claim 1, wherein the input values and the output values are spaced equally in the time domain.

3. (previously presented) A method according to claim 1, wherein the input values and the output values are spaced equally in the time domain and the interpolation values are computed in dependence on the phase difference between an input value and an output value.

4. (previously presented) A method according to claim 1, wherein after the output values have been produced by addition of the first input value to at least one scaled interpolation value, output values are produced by equating with the last output value produced by addition or with the second input value.

5. (previously presented) A method according to claim 1, wherein the interpolation progression ends with a different value than that with which it starts.

6. (previously presented) A method according to claim 1, wherein the profile of the interpolation progression begins with zero.

7. (previously presented) A method according to claim 1, wherein the output values are produced by means of a chain of delay elements, whereby an input value at the start of the chain is used, the values of the delay elements are passed on in the clock of the output values and an interpolation value is added at the input, the output, or the input and the output of at least one delay element.

8. (previously presented) A method according to claim 1, wherein the interpolation progression is wholly or partly present in the form of at least one mathematical description and the interpolation values are computed by application of the at least one mathematical description.

9. (previously presented) A method according to claim 1, wherein the input values are data symbols of a data transmission with pulse amplitude modulation.

10. (currently amended) A method according to claim 1, wherein the input values are data symbols of a data transmission according to ~~the~~ a DSL standard.

11. (previously presented) An apparatus for the interpolation of input values of an input signal, comprising:

means for producing output values of an output signal in dependence on the input value of an input signal, wherein the frequency of the output signal is greater than the frequency of the input signal and the shape of the output signal essentially corresponds to the shape of the input signal;

means for determining the difference in each case between a first and a subsequent second input value;

means for scaling interpolation values of an interpolation progression in dependence on the difference determined between the first and subsequent second input value; and

means for producing successive output values in each case for addition of the first input value to a scaled interpolation value.